

ATTENTION GRAPE GROWERS: FREEZE DAMAGE REPORT

And Suggested Action

As is now readily apparent, the extremely unusual cold temperatures experienced from April 4-9, 2007, following on the heels of extraordinarily warm temperatures from March 21 to April 3, have led to severe damage to grapevines and other fruit crops throughout the Midwest. Several pertinent points to consider:

- Damage in Nebraska vineyards is varied. Eastern Nebraska vines in many cases had broken bud (in our Nemaha research vineyard Marechal Foch, Leon Millot with ½” to 1 ½” shoots, now “freeze-dried” – toast!) or had swollen buds at various stages – primary buds dead for many cultivars at our Nemaha vineyard.
- Central and Western Nebraska vines were less advanced, with Marechal Foch and Saint Croix primary buds looking green and healthy at Mac’s Creek Vineyards on April 13th and nearly all cultivars at our Scottsbluff vineyards showing little to no bud damage on April 14th.
- **THE JURY IS STILL OUT!** That is, at this time it may not be possible to accurately assess damage that may have occurred to trunks, cordons and canes resulting from freezing of the sap caused by activity of the vines because of the warm temperatures in March /early April. It may be early to mid-summer before a complete damage assessment can be made.

WHAT SHOULD WE DO?

1. Evaluate current status of vines and buds by cutting through unopened buds to observe viability of primary, secondary and tertiary buds, (green and moist is good; brown = probably dead). For buds that have already broken, observe their condition – by now in some locations there may be some healthy new shoots.
2. Continue to observe vines and buds as the vines begin re-growth and recovery. There were a few buds green and approaching bud-break at Nemaha on April 18 (probably secondary).
3. **DO NOT ABANDON NORMAL VINEYARD MANAGEMENT PRACTICES.** Apply appropriate spray programs, weed control and vine management to maintain a healthy vine.
4. If severe trunk damage has occurred, encourage a few suckers, which will become trunk replacements (avoid hitting them with herbicides or string trimmers).
5. Assess fruit set, if any, to determine potential yield – conduct cluster counts. In addition to providing some potential income, the developing crop will help balance what could become rampant, difficult to manage vine growth.

6. For severely damaged vines, limit irrigation and do not apply nitrogen fertilizer. The goal is to achieve balanced vine growth as noted in #5 above.

More to come. Send up-dates and damage assessment observations to pread@unl.edu or dmichel@unl.edu. We'll try to post as time permits.

STATUS AROUND THE MIDWEST

(Data are sketchy; updates will be posted periodically.)

In Nebraska:

Eastern: Severe damage, with significant crop loss likely.

Central: variable, slight to severe damage and possible crop loss

Western: Looking good so far, but late frost/freeze events often are a problem.

Western Illinois: extremely variable with several vineyards reporting split trunks and cordons.

Missouri: significant freeze damage -- Keith Striegler and Andy Allen are estimating that Missouri and Arkansas grape crops "have been reduced by approximately 95% of normal".

Arkansas: worst damage in over 40 years according to Justin Morris.

Iowa: variable damage, with central and southern parts most hard-hit because of advanced vine growth activity. Northern Iowa may be less hard-hit, a bit like western Nebraska and Minnesota because vines were not as advanced.